

1223 SEP 23 1999



F R I E N D S O F T H E R I V E R

915 20th Street, Sacramento, CA 95814

916/442-3155 • FAX: 916/442-3396 • E-mail: info@friendsoftheriver.org • www.friendsoftheriver.org

CALIFORNIA'S STATEWIDE RIVER CONSERVATION ORGANIZATION

BOARD OF DIRECTORS

Jim Wheaton, Chair
President, Environmental Law Fndn.
Senior Counsel, First Amendment
Project

Scott Armstrong
Owner, All Outdoors River Co.

Jacqueline Ball
Resource Manager

Nancy Harris Campbell
Principal, Harris and Associates

Ed Conn, Secretary
Artist, Trout Fisher,
Retired CEO, Touje Intl.

Adam Diamant
Economic Consultant

Mark Dubois, Director Emeritus
International Coordinator,
Earth Day 2000

Rob Ferroggiaro, Treasurer
Principal, Ferroggiaro
Consulting Group

Walter Kieser
President, Economic &
Planning Systems

Doug Linney
President,
The Next Generation

Thomas N. Lippe
Environmental Attorney

Laurel Marcus
Restoration Ecologist,
Laurel Marcus and Associates

Harriet Moss, Vice Chair
President and CEO, Antenna Theater

Sarah Rose
Political Director, California League
of Conservation Voters

Beth Rundquist
Owner, Rivers and Mountains

Dolly Sandoval
Trustee, Foothill DeAnza
Community College Dist.

JoAnne Skinner, Vice Chair
Retired Publicity Director,
Jossey Bass Publishers

Sue Steinberg
Principal, Susan Steinberg
Media Consultants

Melissa Eizenberg, ex officio
Real Estate Agent

EXECUTIVE DIRECTOR
Betsy Reifsnider

ASSOCIATE DIRECTOR
Meg Johnson

CONSERVATION DIRECTOR
Steve Evans

DEVELOPMENT DIRECTOR
Richard Penny

September 23, 1999

Mr. Rick Breitenbach
CALFED Bay-Delta Program
1416 Ninth Street, Suite 1155
Sacramento, CA 95814

Dear Mr. Breitenbach:

Friends of the River is pleased to submit the attached comments on the CALFED Revised Phase II Report, Revised Draft EIS/EIR.

In addition to these comments, we incorporate by reference our June 1998 comments on the CALFED Draft Programmatic EIS/EIR. In addition, we incorporate by reference the comments which our attorney, Tara Mueller, will be filing separately.

Thank you for the opportunity to comment.

Sincerely,

Steve Evans (in)

Steve Evans
Conservation Director

Betsy Reifsnider

Betsy Reifsnider
Executive Director



A NONPROFIT TAX DEDUCTIBLE ORGANIZATION



F R I E N D S O F T H E R I V E R

915 20th Street, Sacramento, CA 95814

916/442-3155 • FAX: 916/442-3396 • E-mail: info@friendsoftheriver.org • www.friendsoftheriver.org

CALIFORNIA'S
STATEWIDE RIVER
CONSERVATION
ORGANIZATION

BOARD OF DIRECTORS

Jim Wheaton, Chair
President, Environmental Law Fdn.
Senior Counsel, First Amendment
Project

Scott Armstrong
Owner, All Outdoors River Co.

Jacqueline Ball
Resource Manager

Nancy Harris Campbell
Principal, Harris and Associates

Ed Conn, Secretary
Artist, Trout Fisher,
Retired CEO, Touje Intl.

Adam Diamant
Economic Consultant

Mark Dubois, Director Emeritus
International Coordinator,
Earth Day 2000

Rob Ferroggiaro, Treasurer
Principal, Ferroggiaro
Consulting Group

Walter Kieser
President, Economic &
Planning Systems

Doug Linney
President,
The Next Generation

Thomas N. Lippe
Environmental Attorney

Laurel Marcus
Restoration Ecologist,
Laurel Marcus and Associates

Harriet Moss, Vice Chair
President and CEO, Antenna Theater

Sarah Rose
Political Director, California League
of Conservation Voters

Beth Rundquist
Owner, Rivers and Mountains

Dolly Sandoval
Trustee, Foothill-DeAnza
Community College Dist.

JoAnne Skinner, Vice Chair
Retired Publicity Director,
Jossey-Bass Publishers

Sue Steinberg
Principal, Susan Steinberg
Media Consultants

Melissa Eizenberg, ex officio
Real Estate Agent

EXECUTIVE DIRECTOR
Betsy Reifsnider

ASSOCIATE DIRECTOR
Meg Johnson

CONSERVATION DIRECTOR
Steve Evans

DEVELOPMENT DIRECTOR
Richard Penny

Comments of Friends of the River
CALFED Revised Phase II Report, Revised Draft EIS/EIR
September 22, 1999**Surface Storage**

A major component of the CALFED Bay Delta Program is the development of surface water storage. CALFED is considering 12 projects that could provide 5-6 million acre feet of new surface water storage in the Central Valley, representing a substantial increase in existing storage. And yet, very little information is available in the Phase II report, the RDEIS/R, or its current appendices, concerning how this storage will be provided, the environmental impacts of the specific projects considered, or the cost and the water yield of the projects.

CALFED's screening process for possible surface storage projects is hidden from public view and makes little sense to anyone viewing the process from the outside. To the extent that any information from the screening process is available to the public, it appears the screening process is failing to consider such key issues as conflicts with existing state and federal laws and regulations, conflicts with CALFED principles, and conflicts with other CALFED goals and objectives (particularly in regard to ecosystem restoration).

The screening process is also considerably behind the rest of the CALFED program. Basic information concerning the surface water storage component, including overall environmental impacts of the storage component, costs, water yields, and effects on other CALFED goals and objectives, are not available in the Phase II report and RDEIS/R for the public review and comment. According to CALFED staff, some of this basic information may become available in October 1999, but maybe not. This is not a legally satisfactory situation under either NEPA or CEQA.

To the extent that the screening process has reduced the list of possible surface water storage projects under consideration from 51 projects in 1997 to 12 projects today indicates that CALFED is making progress. However, the lack of basic information concerning this important process raises serious questions about how decisions are made and what criteria is used when making decisions.

For example:

* CALFED is to be commended for eliminating a potential high raise of Shasta dam. The 60-200 foot raise of the dam and enlargement of its reservoir would have serious environmental impacts on upstream rivers, the adjacent forest ecosystem, nearby communities, and northern California's transportation system.



But even CALFED's proposed 6.5 foot raise of Shasta dam will have serious impacts on upstream rivers, as well as violate existing state law requiring the protection of the McCloud River's free flowing character and outstanding values.

* CALFED is to be commended for dropping the Garden Bar dam project on the Bear River from further consideration because it failed to meet CALFED's promise not to pursue new on-stream reservoir sites. But CALFED is still pursuing the Red Bank Project, even though this so called offstream storage project potentially includes a large on-stream dam and reservoir (Dippingvat).

* CALFED is also to be commended for eliminating two offstream storage sites in the San Joaquin Valley (Orestimba & Garzas) because they conflicted with endangered species habitat protection goals. However, why is CALFED still pursuing the Panoche project in the San Joaquin Valley, which has even greater endangered species conflicts?

* CALFED's screening process identified several surface storage projects in the San Joaquin Valley that failed to meet CALFED's economic and water yield criteria. And yet, many of these projects are still under consideration for "special considerations." This smacks of technical analysis and science bending to political will.

Friends of the River's review of CALFED's two year old surface storage appendix, as well as previous studies conducted by federal and state agencies of specific projects identified by CALFED, indicates a high probability of significant environmental impact, as well as outright conflicts with existing state and federal laws and regulations, and CALFED principles, goals, and objectives.

A summary of the key issues, conflicts, and environmental impacts of CALFED's surface storage projects follows:

Shasta Dam Raise -- In response to public concerns about the environmental and economic impacts of raising Shasta dam by up to 200 feet, CALFED's Phase II Report identified for further evaluation a 6.5 foot raise of the dam. Although this alternative certainly has less impact than the 200 foot raise originally contemplated by CALFED, its implementation is contrary to state law and an existing federal management plan, and poses a serious threat to upstream fisheries.

The California Public Resources Code (Sec. 5093.542) declares that the McCloud River directly upstream of the existing Shasta reservoir "possesses extraordinary resources" and "supports one of the finest wild trout fisheries in the state." The code expressly prohibits the construction of any "dam, reservoir, diversion, or other water impoundment facility" on the McCloud upstream of the McCloud River bridge (near the current upper limit of Shasta reservoir). Although the code permits the California Department of Water Resources (DWR) to participate in "technical and economic feasibility" studies concerning the potential enlargement of Shasta dam, all state agencies are forbidden to permit, assist, or cooperate in the "planning or construction of any dam, reservoir, diversion, or other impoundment facility that could have an adverse effect on the free

flowing condition of the McCloud River, or on its wild trout fishery." The U.S. Forest Service determined the McCloud River upstream of Shasta reservoir to be eligible for National Wild & Scenic River status in recognition of its free flowing character and outstanding cultural/historical, geological, and wild trout fishery values. The Forest Service chose not to recommend to Congress that the McCloud be added to the National Wild & Scenic River System, in favor of participating with private land owners in the implementation of a Coordinated Resource Management Plan (CRMP) intended to protect the free flowing character and outstanding values of the river. The Forest Service noted that if "the CRMP fails to protect the values which render the river suitable for designation, then the Forest Service will consider recommendation to the National Wild & Scenic Rivers System" (Shasta-Trinity National Forest Plan Record of Decision, USFS, April 1995). Members of the McCloud River CRMP are on record opposing raising of Shasta dam, but if CALFED chooses to move forward on a 6.5 foot dam raise, it would do so without a state partner, and the decision would necessarily trigger the appropriate management action by the Forest Service.

Red Bank Project -- This offstream storage project in Tehama County would divert water from the Cottonwood Creek watershed for storage in the adjacent Red Bank watershed. Contrary to the Phase II Report's assurance that "CALFED will not pursue storage at new on-stream reservoir sites" (Phase II Report pg. 90), the original project requires the construction of the 250 foot-high Dippingvat dam on the South Fork Cottonwood Creek, creating a 104,000 acre-foot reservoir.

The South Fork is a free flowing perennial stream that supports habitat for threatened and endangered steelhead and spring run chinook salmon. The dam would partially drown and block access to more than 15 miles of this critical holding and spawning habitat. The dam would also restrict downstream gravel recruitment into a segment of the Sacramento River that provides critical spawning habitat for the endangered winter run chinook salmon. Cottonwood Creek is regarded by the U.S. Fish and Wildlife Service as "one of the most important sources" of spawning gravel for Sacramento River salmon (Anadromous Fish Restoration Plan, USFWS, May 1995). The California Department of Fish and Game (CDFG) considers spawning gravel to be a "finite resource in the Sacramento River system and Cottonwood Creek contains one of the most important reserves" (Restoring Central Valley Streams, CDFG, November 1993).

The Dippingvat dam and reservoir would also inundate a segment of the South Fork determined eligible by the Bureau of Land Management (BLM) for National Wild & Scenic River status in recognition of its free flowing character and outstanding recreation, scenic, and geologic values (Redding Resource Area Plan, BLM, July 1992). The South Fork is also included in the National Park Service, Nationwide Rivers Inventory (September 1996).

According to CALFED documents, the entire project would inundate approximately 4,200 acres of terrestrial wildlife habitat and more than 20 miles of permanent and intermittent stream. CALFED targeted restoration species that could be adversely impacted by the project include spring chinook salmon, steelhead, California red-legged frog, northwestern pond turtle, Swainson's hawk, and yellow warbler.

The table listing potential reservoir sites on pg. 91 of the Phase II report omits mention of the Dippingvat dam and reservoir as part of the Red Bank project. This implies that at least this large dam has been eliminated from consideration, although it would appear that a Cottonwood Creek diversion would still be required to fill the offstream reservoir. As of August 1999, CALFED staff were unable to confirm the status of the Dippingvat dam as part of the Red Bank project. How can the public make relevant comments without up to date information? How can this project be seriously considered when CALFED staff don't even know if key components are being eliminated or revised?

Ironically, the Red Bank project, even with the Dippingvat dam, yields very little water. The implication is that a revised project, with just a diversion dam on Cottonwood Creek and no in-stream storage, would produce even less water. Why doesn't CALFED simply eliminate this project and put this debate to rest?

Thomes-Newville, Sites, & Colusa Projects -- These offstream reservoir projects on the west side of the Sacramento Valley would all depend on diversions from the Sacramento River to supply water. The diversion to supply the offstream reservoirs has been characterized by CALFED as a 5,000 cubic feet per second (cfs) diversion during flood flows. However, flow analysis by DWR indicates that this diversion could reduce the annual monthly flow of the Sacramento River by 14 percent in January to 67 percent in April (DWR Offstream Storage Investigation, September 1998). Since the mean annual flow in the Sacramento River has already been reduced by 35 percent by existing dams and diversions (CALFED Strategic Plan for Ecosystem Restoration, December 1998), additional diversions to supply new offstream storage reservoirs could significantly reduce flows needed to maintain the ecological functions of the river.

The State of California recommended the establishment of a Sacramento River Riparian Conservation Area where "the natural river process of erosion and deposition would be allowed to occur" (Upper Sacramento River Fisheries and Riparian Habitat Management Plan, January 1989). This was adopted as a major goal of CALFED's ecosystem restoration plan, which proposes to protect, enhance, and restore the Sacramento River's riparian meanderbelt. The meanderbelt depends, in part, on natural flows to dynamically erode banks and create new habitat. New diversions from the river to supply offstream storage reservoirs, without ensuring the maintenance of sufficient natural flows to support the ecological functions of the meanderbelt, could prevent attainment of this critical CALFED restoration goal. In some years, operational criteria to eliminate or reduce these impacts would significantly reduce the viability of these sites as water storage facilities.

According to CALFED documents, the Thomes-Newville project would inundate up to 13,900 acres of woodland, grassland, and wetland habitat, including 35 miles of perennial and 35 miles of seasonal stream habitat. CALFED targeted restoration species that could be adversely impacted include spring and fall chinook salmon, steelhead, western spadefoot toad, bank swallow, willow flycatcher, and Swainson's hawk.

According to CALFED documents, the Colusa project would inundate 29,600 acres of woodland, grassland, and wetland habitat, including 36 miles of seasonal streams. CALFED targeted

restoration species that could be adversely impacted include western pond turtle, western spadefoot toad, California red-legged frog, valley elderberry longhorn beetle, sandhill crane, and Swainson's hawk.

According to CALFED documents, the Sites project would inundate 12,300-14,700 acres of woodland, grassland, and wetland habitat and 25 miles of seasonal streams. CALFED targeted restoration species that could be adversely impacted include western pond turtle, western spadefoot toad, California red-legged frog, valley elderberry longhorn beetle, sandhill crane, and Swainson's hawk.

Quinto Project -- This offstream storage reservoir project on the west side of the San Joaquin Valley would store surplus water from the California Aqueduct. The project failed CALFED's water yield and economic feasibility screening, but was included in the ultimate list of 12 projects for further evaluation due to "special considerations" (CALFED Surface Water Storage Screening Process, January 1999). All or portions of this project could impact property recently acquired by The Nature Conservancy to protect rare sycamore alluvial woodlands, as well as habitat for California red-legged frog, western spadefoot toad, and Western pond turtle -- all species and habitats specifically targeted by CALFED for protection and restoration. The project would not only drown these sensitive habitats and species under a large reservoir, but the reservoir would also act as vectors for invasive non-native species such as bullfrogs that both displace and predate on native amphibians.

Panoche Project -- This is also an offstream storage reservoir project on the west side of the San Joaquin Valley that would store surplus water diverted from the California Aqueduct. It too failed CALFED's water yield and economic feasibility screening, but was included in the final list of 12 projects. Depending on its ultimate size and location, the project could encroach on the Panoche Hills South Wilderness Study Area (040-301B), which is provided interim protection of its wilderness character by the BLM under the Federal Land Policy and Management Act (FLPMA). Section 603 of FLPMA requires the BLM to protect the wilderness suitability of Study Areas such as Panoche Hills South until Congress acts on the BLM's recommendation.

In addition, the Panoche project would encroach on public lands managed by the BLM as Areas of Critical Environmental Concern (ACEC) to protect significant paleontological values, rare plants, and sensitive, threatened, and endangered species, including the San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, and San Joaquin antelope squirrel. The project would also inundate several hundred acres of public lands in the Ciervo-Panoche Natural Area that have been designated by the U.S. Fish and Wildlife Service as critical habitat for 14 sensitive, threatened, and endangered plant and wildlife species. (Recovery Plan for Upland Species of the San Joaquin Valley, USFWS 1998).

The project is also located in the Panoche/Silver Creek watershed, which is a significant natural source of toxic selenium (San Joaquin Valley Drainage Program Management Plan pg. 28, USDI/Resources Agency, September 1990) that could pollute the water stored in the proposed Panoche reservoir.

Montgomery Project – This offstream storage project would divert flows from the Merced River. According to CALFED documents, up to 8,100 acres of wildlife habitat and an unknown amount of streamside and wetland habitat would be inundated. CALFED targeted restoration species that could be adversely impacted include fall chinook salmon, steelhead, valley elderberry longhorn beetle, several species of fairy shrimp, red-legged frog, California tiger salamander, and giant garden snake.

Los Vaqueros Enlargement – Enlargement of this existing offstream reservoir would divert flows from the Delta. This project failed CALFED's water yield and economic screening process. Depending on the size of the enlargement, up to 3,340 acres of habitat set aside as mitigation for the existing reservoir would be inundated. CALFED targeted restoration species that could be adversely impacted include winter, spring and fall chinook salmon, steelhead, delta smelt, Sacramento splittail, valley elderberry longhorn beetle, several species of fairy shrimp, red-legged frog, giant garden snake, Swainson's hawk, California clapper rail, sandhill crane, and Aleutian Canada goose.

Ingram Canyon Project – No CALFED documents are available concerning this project. It failed CALFED's water yield and economic screening process. Because it would divert Delta water via the California Aqueduct, it would also adversely impact Delta fisheries.

Millerton Enlargement – Raising Friant dam and enlarging Millerton reservoir would inundate up to 3,000 acres of wildlife habitat and more than ten miles of permanent and seasonal stream habitat. Much of the Millerton State Recreation Area and an upstream segment of the San Joaquin River utilized by whitewater boaters would also be inundated. This project failed CALFED's water yield and economic screening process. CALFED targeted restoration species that could be adversely impacted include the valley elderberry longhorn beetle, several species of fairy shrimp, giant garden snake, California tiger salamander, western spadefoot toad, and Aleutian Canada goose.

Water Use Efficiency Program Plan

Friends of the River has worked closely with CALFED staff and other stakeholders in developing both the urban and agricultural portions of the proposed CALFED water use efficiency program. As the 1999 Convener of the California Urban Water Conservation Council and as a member of CALFED's Agricultural Water Use Efficiency Steering Committee, Friends of the River appreciates the expertise and dedication provided by CALFED's staff person assigned to water efficiency. We remain concerned that CALFED has assigned only 2/3s of a staff person to water efficiency while approximately 70 are working on the Integrated Storage Investigation.

No Action Alternative versus CALFED-Induced Savings

In both the agricultural and urban sections of the Draft EIR/EIS, CALFED assumes that full BMP implementation will be achieved under the No Action Alternative by the year 2020. Both the California Urban Water Conservation Council and the U.S. Bureau of Reclamation can attest to the fact that many urban water agencies and some agricultural water agencies have made

substantial progress in implementing water efficiency practices while others have taken only preliminary steps at best.

This is of grave concern. By assuming that full BMP implementation will be achieved without aggressive CALFED requirements and incentives, water conservation's real potential will not be achieved. CALFED's Implementation Plan allows progress on design and permitting of storage facilities before completing the description and development of objectives of the water use efficiency element. As a result, CALFED agencies continue to place substantial resources into designing and permitting storage and conveyance projects, while providing very limited resources to proven efficiency measures.

CALFED Assumptions and Methods

CALFED does not identify the assumptions or methods by which it has estimated water savings from full BMP implementation. CALFED uses estimates from DWR's Bulletin 160-98 as a foundation through much of the document. Friends of the River and other environmental organizations have previously submitted comments to DWR stating that Bulletin 160-98 substantially underestimates water conservation and water reuse while promoting dams and other costly engineering solutions.

We request that CALFED take into account the testimony which Dennis O'Connor, Assistant Director of the California Research Bureau, presented to the Senate Select Committee on the CALFED Water Program. As Mr. O'Connor stated, "If CalFed is trying to meet an overstated demand, they will exclude otherwise viable options because they cannot meet the overstated demand. Finally, a small error can generate a lot of water. A difference of 10 gpcd is equal to 360,000 acre-feet per year, the capacity of Hetch Hetchy."

Water Conservation Costs

Friends of the River agrees with the statement made by the California Urban Water Conservation Council in its comments to CALFED concerning water conservation cost concepts and estimates. The Council states: "We believe the cost estimates presented in Figure 5-3 are potentially misleading for several reasons. First, the cost of a conservation activity depends on one's perspective. One could view it from the perspective of the customer participant, the customer non-participant, the utility, or society as a whole. Each perspective results in a different cost estimate... Second, the figure makes no distinction between active and passive conservation... Finally, we cannot emphasize enough that these estimates are not sufficient to judge the economic merit of conservation investments. To judge the merit of a program one must have a feel for both the costs and the benefits. Programs with high costs may have equally high benefits and vice versa. Unit cost estimates tell only half the story. The Water Use Efficiency Program Plan needs to make this point clear whenever it presents cost estimates. Otherwise, readers are likely to draw incorrect conclusions about the economic merits of conservation investments."

Premature Documentation

As a participant in development of the agricultural and urban water efficiency program elements, Friends of the River is aware of the complexity and difficulty in developing reliable conservation

estimates and a detailed comprehensive program. Section 1.5 states, "Between the Draft Programmatic EIR/EIS and the Final Programmatic EIR/EIS in early 2000, work will continue on refining and evaluating the Preferred Program Alternative."

Friends of the River agrees that CALFED should not make a rush to judgment on the water use efficiency program. Many work groups are currently developing parts of the water efficiency program. Many other program elements (water quality and transfers) which directly affect efficiency are also underway. Much work remains to be done before the urban and especially the agricultural water use efficiency program elements are finalized. While progress is being made, it is premature to expect this level of program description to be adequate for a NEPA/CEQA document. The public should be allowed to comment on the final program elements before the Record of Decision.

Lack of Measurement

In Stage 1, CALFED will develop state legislation that requires "appropriate measurement of water use for all water users in California." CALFED expects this "appropriate measurement" to "vary by region. Aspects of this definition include the nature of regional difference, appropriate point of measurement, and feasible level of precision."

Since 1969, the American Water Works Association has insisted that "every water utility should meter." Section 3405(a) of the Central Valley Project Improvement Act requires that:

"... certain districts or agencies contracting with Reclamation, shall ensure that all surface water delivery systems within their boundaries are equipped with water measurement devices or water measuring methods of comparable effectiveness acceptable to the Secretary [of Interior]. Measurement must be in place within five years of the date of contract execution, amendment, or renewal, and any new surface water delivery systems installed within a district's boundaries on or after the date of contract renewal."

The CVPIA has been federal law since 1992. In implementing Section 3405(a), the Bureau of Reclamation lists measurement devices as a "critical best management practice" and specifies what constitutes appropriate measurement devices. As a member of the CALFED Agricultural Water Use Efficiency Steering Committee, Friends of the River will insist that, at the very least, CALFED follow Reclamation's "Criteria for Evaluating Water Management Plans -- 1999."

Evapotranspiration

The Draft EIR/EIS states, "The expert panel that reviewed the CALFED approach for this component recommended that evaporation and transpiration be estimated separately. These factors will be quantified separately as part of the planned refinement of conservation estimates (to take place prior to the Record of Decision). The independent review panel recognized that current methods may prevent confident evaporation estimates. Therefore, CALFED will conduct evaporation research during Stage 1."

Friends of the River agrees that evaporation and transpiration should be quantified separately prior to the Record of Decision. Unfortunately, the research will take place after the ROD,

during Stage 1. Because this analysis could have a significant impact on agricultural and landscape water use efficiency, Storage and Conveyance options should not be allowed to proceed until the evaporation and transpiration analysis is completed.

Urban and Agricultural Water Conservation Councils

In Section 2, the CALFED document recommends a water use efficiency program using the California Urban Water Conservation Council (CUWCC) as the entity to certify compliance with urban water conservation practices. Friends of the River supports this recommendation.

Unfortunately, the CALFED document also states that "CALFED's agricultural water conservation program contains a different, yet equally rigorous approach which will establish quantifiable objectives and rely heavily on the stakeholder-driven Agricultural Water Management Council [AWMC]."

While the CUWCC enjoys meaningful participation by both urban water and environmental representatives, the AWMC is comprised of agricultural water interests and only one environmental organization that works on water issues. Furthermore, the AWMC is based on planning, not performance. Members are expected to develop plans, but are not required to meet efficiency standards. The AWMC Memorandum of Understanding specifically states that it does not intend to target on-farm use of water. Since that is where many of the irrigation efficiency improvements can be made, as well as choices about cropping patterns, eliminating the end user misses major opportunities for efficiency improvements. In contrast, the CUWCC Memorandum of Understanding targets both agency distribution systems as well as end users.

Friends of the River acknowledges that the AWMC should participate in CALFED's Agricultural Water Use Efficiency Steering Committee and can facilitate local districts' implementation strategies. However, it should not be given nearly the level of responsibility or funding as CUWCC for the reasons stated above.

CALFED Stage 1 Ecosystem Restoration Actions

CALFED's list of Stage 1 Ecosystem Restoration Actions (Ecosystem Restoration Program Plan, Strategic Plan for Ecosystem Restoration) are limited and need expansion. If CALFED intends to make significant gains in ecosystem restoration in the next 7 years, it must embrace a more ambitious action plan.

Although actions that complement existing programs is a plan criteria, the definition of complementary actions appears limited to just CALFED activities. In fact, there are many federal and state programs that should be incorporated into CALFED's restoration plan. Complementary programs that should provide key complementary actions for CALFED's restoration program include the Resources Agency's Upper Sacramento River Fisheries and Riparian Habitat Restoration Plan (1086 Plan), the U.S. Fish and Wildlife Service's Anadromous Fish Restoration Plan, the Department of Fish and Game's Central Valley Restoration Plan, and existing Bureau of Land Management and Forest Service land and resource management plans.

Friends of the River recommends the following revisions and additions to CALFED's Ecosystem Restoration Program Plan: Strategic Plan for Ecosystem Restoration, Appendix D, Draft Stage 1 Actions (additions and revisions in caps):

East Delta Habitat Corridor, pg. D9, add:

ACTION 7: ACQUIRE HABITAT ALONG THE COSUMNES RIVER THROUGH WILLING SELLER FEE TITLE PURCHASES AND CONSERVATION EASEMENTS.

ACTION 8: SET BACK LEVEES ALONG THE COSUMNES RIVER TO RECONNECT THE RIVER TO ITS FLOODPLAIN, RESTORE HABITAT, AND REDUCE FLOOD DAMAGE.

ACTION 9: ACQUIRE HABITAT IN THE STONE LAKES AREA THROUGH WILLING SELLER FEE TITLE PURCHASE AND CONSERVATION EASEMENTS.

Note: The actions above complement the existing efforts of private, local, state, and federal agencies to establish the Cosumnes River Preserve and the Stone Lakes National Wildlife Refuge.

ACTION 10: REMOVE IRRIGATION DAMS THAT BLOCK SALMON AND STEELHEAD MIGRATION IN THE COSUMNES AND MOKELUMNE RIVERS AND REPLACE WITH FISH FRIENDLY PUMPS OR AGGREGATED DIVERSION FACILITIES.

ACTION 11: DETERMINE THE FEASIBILITY OF REMOVING THE WOODBRIDGE DAM ON THE MOKELUMNE RIVER TO FACILITATE SALMON AND STEELHEAD PASSAGE.

Note: The actions above complement USFWS and CDFG Anadromous fish restoration plans.

San Joaquin River Habitat Corridor, pg. D3, add:

ACTION 3: ACQUIRE HABITAT ALONG THE SAN JOAQUIN RIVER THROUGH WILLING SELLER FEE TITLE PURCHASE OR CONSERVATION EASEMENTS.

Note: This action complements the existing effort of federal agencies to establish the San Joaquin River Wildlife Refuge.

Sacramento River, pg. D-19, add and revise:

Action 3: Evaluate the feasibility of setting back levees AND ACQUIRE HABITAT FROM WILLING SELLERS between Chico Landing and Verona.

Note: This action complements the existing effort of federal agencies to establish the Sacramento River National Wildlife Refuge.

Action 4: Prevent fish from straying into the Colusa Basin Drain AND REDUCE SOURCES OF SEDIMENT AND PESTICIDES INTO THE DRAIN.

Note: This action is mandated by the Central Valley Project Improvement Act.

ACTION 5: DETERMINE THE FEASIBILITY OF REMOVING THE RED BLUFF DIVERSION DAM AND REPLACING IT WITH FISH FRIENDLY PUMPS.

Note: This action complements the efforts of many local, state, and federal agencies to improve fish passage at the Red Bluff Diversion Dam.

ACTION 7: ACQUIRE HABITAT ON A WILLING SELLER BASIS BETWEEN COTTONWOOD CREEK AND RED BLUFF.

ACTION 8: MAINTAIN THE FREE FLOWING CHARACTER AND OUTSTANDING VALUES OF THE SACRAMENTO RIVER.

Note: This action complements the existing BLM Resource Area Plan.

ACTION 9: ESTABLISH MINIMUM FLUSHING FLOWS, TO MAINTAIN HEALTHY ECOLOGICAL PROCESSES, INCLUDING RIVER MEANDER.

Note: This action complements the 1086 Plan, CVPIA, and an existing CALFED restoration goal.

Deer Creek Stage 1 Actions, pg. D-22, revise and add:

Action 3. Acquire water from willing sellers to providing instream flows for anadromous fish AND NATIVE RESIDENT FISH.

Note: State regulations require sufficient flows below dams to maintain healthy fish populations.

ACTION 7: ACQUIRE HABITAT ALONG DEER CREEK FROM WILLING SELLERS BETWEEN THE NATIONAL FOREST BOUNDARY THE VALLEY FLOOR.

Note: This complements the existing BLM Resource Management Plan.

ACTION 8: MAINTAIN THE FREE FLOWING CHARACTER AND OUTSTANDING VALUES OF DEER CREEK.

Note: This complements existing BLM and Forest Service management Plans.

Clear Creek Stage 1 Actions, pg. 27, add:

7. ACQUIRE HABITAT FROM WILLING SELLERS BETWEEN WHISKEYTOWN DAM AND THE SACRAMENTO RIVER.

8. MAINTAIN THE FREE FLOWING CHARACTER AND OUTSTANDING VALUES OF CLEAR CREEK.

Note: This complements the existing BLM Resource Management Plan.

Mill Creek Stage 1 Actions, pg 28, revise and add:

Action 2: Acquire water from willing sellers to provide instream flows for anadromous fish AND NATIVE RESIDENT FISH.

Note: State regulations require sufficient flows below dams to maintain healthy fish populations.

ACTION 4: ACQUIRE HABITAT ALONG MILL CREEK FROM WILLING SELLERS BETWEEN THE NATIONAL FOREST BOUNDARY THE VALLEY FLOOR.

Note: This complements the existing BLM Resource Management Plan.

ACTION 8: MAINTAIN THE FREE FLOWING CHARACTER AND OUTSTANDING VALUES OF MILL CREEK.

Note: This complements existing BLM and Forest Service management Plans.

Battle Creek Stage 1 Actions, pg. D-29, revise and add:

Action 1: Improve fish passage by removing diversion dams, INCLUDING EAGLE CANYON DAM, and upgrading facilities.

Note: CALFED has chosen not to require the removal of Eagle Canyon dam, even though the dam blocks access to the highest quality salmonid habitat in Battle Creek. If "fail safe" fish screens and ladders proposed for the Eagle Canyon dam do actually fail, than CALFED should remove this dam.

ACTION

6. ACQUIRE HABITAT FROM WILLING SELLERS FROM THE NORTH FORK AND SOUTH FORK CONFLUENCE TO THE SACRAMENTO RIVER.

ACTION 7. MAINTAIN FREE FLOWING CHARACTER AND OUTSTANDING VALUES OF BATTLE CREEK.

Note: These actions complement the existing BLM Resource Management Plan.

Antelope Creek Stage 1 Actions, add new section:

ACTION 1: ACQUIRE WATER FROM WILLING SELLERS TO IMPROVE INSTREAM FLOWS FOR ANADROMOUS AND NATIVE RESIDENT FISH.

ACTION 2: SCREEN ALL DIVERSIONS AND PROVIDE FISH PASSAGE PAST DIVERSION DAMS.

ACTION 3: IMPLEMENT WATERSHED MANAGEMENT PLAN TO REDUCE SEDIMENT, PROTECT AND RESTORE RIPARIAN HABITAT, IMPROVE BASE FLOWS, AND REDUCE WATER TEMPERATURES.

ACTION 4: MAINTAIN FREE FLOWING CHARACTER AND OUTSTANDING VALUES OF ANTELOPE CREEK.

Note: These actions complement the 1086 Plan and the Forest Service management plan.

Cottonwood Creek Stage 1 Actions, pg. D-32, add:

ACTION 3: MAINTAIN FREE FLOWING CHARACTER AND OUTSTANDING VALUES OF COTTONWOOD CREEK.

Note: This action complements agency concerns about the critical importance of spawning gravel recruitment from Cottonwood Creek and the BLM Resource Management Plan.

ACTION

4: ACQUIRE HABITAT ALONG THE UPPER SOUTH FORK FROM WILLING SELLERS.

Note: The South Fork offers probably the best opportunity to create a wildlife corridor connecting both sides of the Sacramento Valley.

Butte Creek Stage 1 Actions, pg. D-34, add:

ACTION 4: DETERMINE THE FEASIBILITY OF PROVIDING ANADROMOUS FISH ACCESS TO UPPER BUTTE CREEK BY REMOVING THE CENTERVILLE HEAD DAM, BUTTE HEAD DAM, AND FORKS OF THE BUTTE HYDRO DAM.

Note: This complements the USFWS Anadromous Fish Restoration Plan.

ACTION 5: CONDUCT GENETIC STUDIES TO DETERMINE THE SOURCE OF SPRING RUN CHINOOK SALMON.

Note: Could it be that 20,000 spring run chinook salmon returned to Butte Creek in 1998 because these are hatchery fish straying from the Feather River and lured into Butte Creek by Feather River water diverted by PG&E's upstream hydro project?

ACTION 6: ACQUIRE HABITAT FROM WILLING SELLERS BETWEEN FORKS OF THE BUTTE AND HIGHWAY 99.

ACTION 7: MAINTAIN THE FREE FLOWING CHARACTER AND OUTSTANDING VALUES OF BUTTE CREEK.

Note, Actions 6-7 complement the BLM Resource Management Plan.

Big Chico Creek State 1 Actions, pg D-35. add:

ACTION 2: RESOLVE FISH PASSAGE PROBLEMS AT ONE MILE AND FIVE MILE DAMS.

ACTION 3: REDUCE STORM DRAIN RUN-OFF INTO BIG CHICO CREEK.

Note: This complements the 1086 plan and federal/state fish restoration plans.

ACTION 3. ACQUIRE HABITAT FROM WILLING SELLERS BETWEEN PONDEROSA WAY AND THE CITY OF CHICO.

ACTION 4: MAINTAIN THE FREE FLOWING CHARACTER AND OUTSTANDING VALUES OF BIG CHICO CREEK.

Note; This complements the BLM Resource Management Plan.

Feather River Stage 1 Actions, pg. D-35, add:

ACTION 3: SCREEN ALL DIVERSIONS TO PREVENT FISH ENTRAINMENT.

ACTION 4: PROTECT AND RESTORE RIPARIAN HABITAT FROM OROVILLE DAM TO THE SACRAMENTO RIVER.

ACTION 5: ACQUIRE HABITAT ON A WILLING SELLER BASIS.

Note: CALFED's existing stage 1 actions for the Feather River seem incomplete considering the importance of this river.

Yuba River Stage 1 Actions, pg. D-37, add:

ACTION 3: REESTABLISH A PERMANENT, REVEGETATED CHANNEL BELOW

HIGHWAY 20.

ACTION 4: ACQUIRE HABITAT ON A WILLING SELLER BASIS DOWNSTREAM OF HIGHWAY 20.

ACTION 5: PREVENT FISH STRAYING INTO SIDE CHANNELS IN THE GOLD FIELDS.

ACTION 6: SCREEN ALL DIVERSIONS TO PREVENT FISH ENTRAINMENT.

ACTION 7: RETROFIT ENGLEBRIGHT DAM TO PROVIDE FISH BYPASS FLOWS INDEPENDENT OF POWER HOUSE OUTFLOWS.

Note: CALFED's Stage 1 actions for the Yuba River seem incomplete given the importance of this river. The recommended additional actions complement existing state and federal fish restoration plans.

ACTION 8: DEVELOP A WATERSHED MANAGEMENT PLAN FOR THE YUBA WATERSHED UPSTREAM OF ENGLEBRIGHT DAM TO REDUCE SEDIMENT, PROTECT AND RESTORE RIPARIAN HABITAT, IMPROVE BASE FLOWS, AND REDUCE WATER TEMPERATURE.

Note: This action complements CALFED's funding of upstream restoration projects.

ACTION 9: MAINTAIN THE FREE FLOWING CHARACTER AND OUTSTANDING VALUES OF THE NORTH, MIDDLE, AND SOUTH YUBA RIVERS, AND THEIR APPROPRIATE TRIBUTARIES.

Note: This complements the existing Forest Service management plan.

American River Stage 1 Actions, pg. D-37, add:

ACTION 4: RESTRICT NEW WATER DIVERSIONS TO THE AMERICAN RIVER CONFLUENCE.

ACTION 5: IMPLEMENT PROPOSALS OF THE SACRAMENTO WATER FORUM INTENDED TO PROTECT THE LOWER AMERICAN RIVER.

ACTION 6: MAINTAIN THE FREE FLOWING CHARACTER AND OUTSTANDING VALUES OF THE LOWER AMERICAN RIVER.

Note: CALFED's stage 1 actions for this river seem incomplete given the importance of this river. The recommended additional actions complement existing state and federal law and a comprehensive strategy developed by the Sacramento Water Forum to protect the natural values

of the American River.

Cache Creek Stage 1 Actions, pg. D-38, add:

ACTION 3: ACQUIRE HABITAT ON A WILLING SELLER BASIS UPSTREAM OF THE CAPAY VALLEY.

ACTION 4: MAINTAIN THE FREE FLOWING CHARACTER AND OUTSTANDING VALUES OF CACHE CREEK.

Note: These actions complement the BLM Resource Management Plan.

PUTAH CREEK STAGE 1 ACTIONS, add new section:

ACTION 1: CONTROL OR ERADICATE NON-NATIVE RIPARIAN PLANT SPECIES.

ACTION

2: IMPROVE INSTREAM FLOWS BY PURCHASING WATER FROM WILLING SELLERS.

ACTION 3: PROVIDE FISH PASSAGE FROM THE DELTA TO MONTICELLO DAM.

ACTION 4: SCREEN ALL DIVERSIONS.

ACTION 5: IMPLEMENT WATERSHED MANAGEMENT PLAN TO REDUCE SEDIMENT, PROTECT AND RESTORE RIPARIAN HABITAT, IMPROVE BASE FLOWS, AND REDUCE WATER TEMPERATURE.

Note: These actions are consistent with restoration efforts on Putah Creek and existing CALFED funded projects.